

REMARKS

Claim Objections

The Examiner objected to the claims 8-33 of the present application as not in compliance with 37 C.F.R. § 1.126, which requires the original numbering of the claims to be preserved throughout the prosecution. Applicants thank the Examiner for identifying these typographical errors. In view of the number of typographical errors and numbering errors with respect to the claims, claims 1-33 have been cancelled and replaced with new claims 34-79. Applicants believe that these new claims now render these claim objections moot. In view thereof, this rejection should be withdrawn.

Claim Rejections – 35 U.S.C. § 112

Claims 1-33 are rejected under 35 U.S.C. Section 112, second paragraph as being indefinite for a variety of reasons which are listed in detail below:

a. The phrase “reduced sufficiently” in claim 1 is deemed to be a “relative term”. Specifically, the Examiner says that this phrase is not defined by the claim and that the specification does not provide a standard for ascertaining the requisite degree of this phrase. Moreover, the Examiner says that it is “unclear as to what quantity of sugar must be contained in the premix for the premix to be considered to have ‘sufficiently reduced’ sugar content”.

b. Claim 1 is also considered to be unclear because line 3 refers to a composition lacks antecedent basis.

c. Claims 2-4 and 17-19 are rejected as omitting “essential steps”. Specifically, the Examiner says that claim 2 recites raising the fusion point of the dessert, but omits the

essential steps necessary to raise the such fusion point. Claim 3 recites elevating the melting point of the dessert, but omits the essential steps necessary to elevate the melting point. Claim 4 recites elevating the melting and fusing points of the dessert, but omits the essential steps necessary to elevate each of these points. Claims 7 and 9 recite that the pelletized product “can be” an ice cream but omit the active step of claiming that the pelletized product “is” an ice cream. Claims 17 and 20 recite that the addition of stabilizers inhibits the fusing of pellets but omits the active step of “adding stabilizers to the dessert premix”. Claim 18 recites that the pelletized dessert can be served at a “thermally safe level” but omits the active step of “serving the palletized dessert at a thermally safe level”.

d. Claim 6 recites the “formulation alteration” of claim 1. According to the Examiner, there is insufficient antecedent basis for this limitation in the claim.

e. According to the Examiner, the phrase “maintains the desired sweetness level at generally the same level as a premix containing from about 13% to about 17% sugar in claim 6 is a “relative term” which renders the claim indefinite. The Examiner says that the phrases “desired sweetness” and “at generally the same level” are not defined by the claim and that the specification does not provide a standard for ascertaining the requisite degree, thus one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Moreover, the Examiner says that it is unclear as to the “sweetness” that the dessert must possess in order to have the “desired sweetness” which is “generally at the same level” of another dessert product’. The Examiner states that “[I]t is unclear as to who determines what is desirable and as to what degree of difference in sweetness would still be considered to be ‘generally the same’”.

f. Similarly, the Examiner also rejects the phrase “sucrose equivalent” in claims 9 and 31 as being relative terms which also render these claims indefinite. According to the Examiner, this phrase is not defined by either of the claims and the specification fails to provide a standard for ascertaining the requisite degree; thus one of ordinary skill in the art would not be reasonably apprised of the scope of invention. The Examiner states that “[I]t is unclear as to which sugars would be considered ‘equivalent’ to sucrose and which ones would not be considered ‘equivalent’ to sucrose”.

g. Additionally, the Examiner also rejects the phrase “commercially available artificial sweetener” in claim 13 as being a relative term that renders this claim indefinite. According to the Examiner, this phrase is indefinite because it is unclear what sweetener is include or excluded since there are many types of artificial sweetener; thus, the scope of the claim cannot be determined.

h. According to the Examiner, claim 14 is unclear because it is unclear what the primary artificial sweeteners are when the “other” sweeteners are added to the composition.

i. According to the Examiner, the phrase “artificial sweeteners can be those yet to be developed for use as sugar replacements” in claim 16 is considered to be a relative term that renders this claim indefinite. Specifically, the Examiner says that this phrase is not defined by the claim and the specification does not provide a standard for ascertaining the requisite degree; thus one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Moreover, the Examiner says it is unclear as to what “artificial sweeteners are yet to be developed”.

j. The Examiner says that the phrase “the frozen dessert premix is for an ice cream product requiring additional sweetness and has a total sugar content...” in claims 23 and 24 is unclear because of the recitation of the term “additional”. According to the Examiner, it is unclear what these “additional” sugars are in relation to the already claimed sugars or if the claimed sugars provide the “additional sweetness” as instantly claimed.

k. Claims 25-27 are rejected because the phrase “vanilla ice cream premix” is said to lack insufficient antecedent basis in claim 19 from which these claims depend.

l. Claims 28-30 are rejected because the phrase “chocolate ice cream premix” is said to lack insufficient antecedent basis in claim 19 from which these claims depend.

In view of the aforementioned rejections, Applicants respectfully traverse.

As mentioned previously herein, original claims 1-33 have been deleted and replaced with new claims 34-79. Applicants have carefully considered each of the above section 112 rejections and believes that these rejections are now moot in view of new claims 34-79. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claim Rejections - 35 U.S.C. § 103

Before getting into the specifics of the prior art rejection, Applicants would like to provide the Examiner with a brief background on the present invention.

Currently, a number of pelletized frozen dessert products are known in the art and commercially available. One of the best-known pelletized frozen dessert products currently available are “DIPPIN’ DOTS®” (which is the subject of U.S. Patent No.

5,126,156 (to Jones)). DIPPIN' DOTS® are made by introducing a premix into a body of liquid cryogen. One of the problems with DIPPIN' DOTS®, however, is that the frozen pellets must be stored at very low temperatures, namely, in sub-zero freezers, in order to maintain the structural integrity of the pellets. Specifically, DIPPIN' DOTS® have to be stored at a temperature no higher than -20°F (about -29 °C), otherwise the pellets will stick together. In contrast, most conventional home freezers (those attached to a refrigerator) maintain a temperature of between about -6°C to about -10°C. It is for this reason that DIPPIN' DOTS® are not available at the grocery store or on-line but only at speciality retail outlets. This is demonstrated in attached Exhibit A, a print-out of the "Frequently Asked Questions" from the Dippin' Dots' website. Under the question entitled, "Can I buy Dippin Dots in groceries or online?" the following explanation is provided as to why DIPPIN' DOTS® are not available in grocery stores or on-line.

"In order to maintain the fun and unique qualities of Dippin' Dots products, we do not sell them at traditional "take home" outlets. Because of the sub-zero storage requirements, Dippin Dots would begin to stick together in your home freezer (emphasis added)."

The present invention overcomes the problems of the prior art, namely, it provides a single phase pelletized frozen dessert product that can be stored in a conventional home freezer (namely, at a temperature of -6°C to about -10°C), while maintaining the structural integrity of the pellets (meaning that the pellets will not stick together). Specifically, the inventors of the present invention have discovered a way to raise the melting point of the premix such that when the premix is introduced to a liquid cryogen

the resulting pelletized frozen dessert has an elevated melting point (or temperature), thus allowing the pelletized dessert to be stored at higher temperatures, such as at a temperature from about -6°C to about -10°C. The elevation of the temperature of the premix, and thus the resulting pelletized frozen dessert is achieved by removing a significant percentage of the sweetener, namely, the sugar (i.e., sucrose or corn sweeteners) from the premix (prior to subjecting it to the cryogen) while still maintaining the desired taste profile. The sweetener that is removed is replaced by one or more artificial sweeteners (such as, sucralose, aspartame, saccharin, acesulphame K and combinations thereof). Specifically, the premix used in the method of the present invention contains from about 30% to about 70% less sweetener than traditional ice cream premixes. Specifically, the premixes used in the methods of the present invention contain from about 0.025% to about 0.075% artificial sweetener and optionally, from about 7.5% to about 8.5% sweetener (sugar or corn sweeteners).

Although previous claims 1-33 have been deleted, Applicants will now address this rejection in connection with new claims 34-79. Applicants also submits that the Examiner has failed to make a *prima facie* case of obviousness.

Claims 1-5 and 8 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Jones (U.S. Patent No. 5,126,156) in view of Tomita et al. (U.S. Patent No. 5,403,611). With respect to Jones, as discussed above, Jones does not teach a method for making a pelletized single phase dessert product by introducing a premix into a body of liquid cryogen to form a single phase pelletized dessert product, wherein the premix comprises an artificial sweetener and further wherein the single phase dessert product can be stored at a temperature of from about -6°C to about -35°C while

maintaining the structural integrity of the pelletized dessert product (meaning that Jones' pelletized dessert product cannot be stored in a conventional home freezer). Rather, the pelletized dessert product of Jones has to be stored at a temperature of about -29°C. If the pelletized dessert product of Jones is stored at a temperature higher than -29°C, then the product will begin to lose its structural integrity and the pellets will begin to stick to one another.

The deficiencies of Jones are not cured by Tomita. First, Tomita does not disclose or suggest a single phase pelletized dessert product nor a method of using cryogen to produce such a product. Instead, Tomita is directed to a process for producing an ice cream having the property of excellent meltdown in the mouth. This "excellent meltdown" is achieved by incorporating air into the ice cream mix which contains 5 to 18% by weight of fat, in a first cylinder of a freezer at a temperature of -3.0°C to -6.0°C to give an overrun of 20% by weight or less, then incorporating air into the mix in a second cylinder of a freezer at a temperature of -3.0°C to -8.0°C to give an overrun of 10 to 150% by weight. Second, Tomita et al. do not disclose or suggest anything about the use of artificial sweeteners in a premix.

Because the Examiner has failed to establish a *prima facie* case of obviousness, this rejection is now moot and should be withdrawn.

Claims 6, 7 and 9-30 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Jones (U.S. Patent No. 5,126,156) in view of Tomita et al. (U.S. Patent No. 5,403,611), further in view of Cole et al. (U.S. Patent No. 4,374,154). According to the Examiner, Jones in view of Tomita teach an ice cream product premix that contains optional stabilizers and flavoring agents but that these references are silent to the

“specific” optional ingredients that are included in the ice cream product. The Examiner cites Cole as teaching an ice cream product with a similar composition to that taught by Jones and Tomita. Specifically, the Examiner says that Cole teaches that the ice cream premix contains 0-2%, preferably, 0.1-0.6%, stabilizers, including gums, in order to improve the shelf life of the ice cream. Moreover, the Examiner says that Cole teaches that artificial sweeteners, including saccharin and aspartame, can be added to an ice cream premix in order to adjust the sweetness of the final composition.

With respect to the ice cream premix containing stabilizers as recited in claims 16, 17, 19 and 25-30, the Examiner says that Cole teaches that preferably, 0.1-0.6% stabilizers, including gums, are utilized in premixes for ice cream desserts in order to improve the shelf life of the ice cream and that therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a premix comprising 0.1-0.6% gum as taught by Cole in the ice cream dessert premix taught by Jones in view of Tomita. According to the Examiner, one skilled in the art would have been so motivated to do so in order to improve the shelf stability of the dessert product as taught by Cole.

Regarding the artificial sweeteners contained in the ice cream premix as recited in claims 6, 9, 10, 12-15 and 20-24, the Examiner argues that Cole teaches that artificial sweeteners, including saccharin and aspartame, were added to such premixes in order to adjust the sweetness of the final composition. Thus, in the Examiner’s opinion, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add an artificial sweetener to an ice cream premix as taught by Jones in view of Tomita in order to increase the sweetness level of the final product. Moreover the Examiner goes

on to state that “[F]urthermore, to use one artificial sweetener or another artificial sweetener would be to substitute one functional equivalent for another and would not make a patentable distinction to the claims. One of ordinary skill in the art at the time the invention was made would have been motivated to choose one artificial sweetener over another depending on which sweetener was most readily available when the product was made.” Applicants respectfully traverse.

Although previous claims 1-33 have been deleted, Applicants will now address this rejection in connection with new claims 34-79.

Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness. Jones and Tomita were discussed above. Applicant hereby incorporates by reference the arguments made previously herein. The deficiencies of Jones and Tomita are not cured by Cole. Like Tomita, Cole does not disclose or suggest a single phase pelletized dessert product nor a method of using cryogen to produce such a product. Instead, Cole discloses a storage-stable frozen dessert product which is sufficiently soft from a home freezer to be extrudable. According to Cole, “[T]hese products can be dispensed by hand from a collapsible package having an extrusion orifice and, preferably, a mechanism to assist in applying pressure to the product” (See column 1, lines 47-51). In column 6, lines 51-62, Cole et al. mention the use of “intensive sweeteners”. Specifically, Cole et al. state

“According to this invention the sweetness of the product can be adjusted to meet any desired level by the use of known food ingredients. The products can be formulated to be free of either intensive sweeteners, such as saccharin or aspartame, or sweetness depressants such as quinine, theobromine, caffeine or naringen; however, the use of such additives to adjust sweetness levels to particular tastes is within the scope of this invention. The specific operative examples set forth in this disclosure

represent products that achieve conventional levels of sweetness without the utilization of these additives”.

Cole simply mentions the use of artificial sweeteners in passing and provides no teaching as to the amount of artificial sweetener to be used. There is absolutely nothing in Cole that would disclose or suggest to one skilled in the art that the saccharin or aspartame disclosed in Cole could be used to replace a large proportion of sweetener normally used in a premix in order to increase the melting point a resulting single phase frozen dessert product, thus allowing said product to be stored in a conventional home freezer.

Because the Examiner has failed to establish a *prima facie* case of obviousness, this rejection is now moot and should be withdrawn.

Although Applicant has argued that the Examiner has failed to establish a *prima facie* case for obviousness in all claim rejections, Applicant will now discuss each individual piece of prior art cited by the Examiner and the present invention's distinctions from them.

Claims 31-33 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Cole et al. (U.S. Patent No. 4,374,154) in view of Igoe et al. (Dictionary of Food Ingredients, 3rd Edition, 1996). According to the Examiner, Cole teaches a premix for a frozen dessert comprising 3-15% milk fat, 2-10% non-fat milk solids, about 7% sucrose and artificial sweeteners, including aspartame. The Examiner says that Cole teaches that the premix can be free of artificial sweeteners, or that artificial sweeteners can be used to adjust the product to meet a desired level of sweetness. The Examiner notes that Cole is silent to the amount of artificial sweetener to use in the frozen dessert premix. Regarding

Igoe et al., the Examiner says that this reference teaches that aspartame is an artificial sweetener which is utilized in frozen desserts. The Examiner notes that Igoe et al. teach that aspartame is used at a level of 0.01-0.02%. In view thereof, the Examiner argues that “[I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use 0.01-0.02% aspartame in the frozen premix as taught by Cole because it is a conventional amount to be used in a frozen dessert as taught by Igoe. It would have been further obvious to one of ordinary skill in the art at the time the invention was made to add more than 0.02% aspartame when desiring to increase the sweetness level of the final product.” Finally, the Examiner notes that the claim is directed to a premix for a frozen dessert and not to the frozen dessert itself. Applicants respectfully traverse.

Claims 31-33 were directed to premixes. As mentioned previously herein, claims 1-33 have been cancelled and replaced with new claims 34-79. This new claim set does not contain any claims directed to premixes *per se*. In view thereof, this rejection is now considered to be moot and should be withdrawn. The Examiner has cited United States Patent No. 5,126,156 against claims 1-30 of the present application. Applicant has amended the claims of the present application to better reflect the distinctions between the present invention and the prior art.

The disclosure of the present application is directed to “an improved frozen dessert pellet that could utilize the existing storage and handling facilities presently utilized for bulk frozen dessert products” (Page 10, Lines 15-17). As stated in the disclosure, the present invention provides a pelletized dessert product comprised of pellets, which are solid in form under temperatures from about -15°C to -25°C, and which have a melting point which is approximately -5°C to -10°C (Page 10, Lines 20-23). This

permits the applicant's product to be shipped and/or stored in conventional freezers and trucks and does not require special lower temperature freezers of the prior art Jones product.

The Jones patent discloses a method of preparing and storing a frozen dairy product by freezing a slowly dripping composition into small beads, as is described in Lines 1-5 of the abstract of the disclosure. But, while the pellets of the frozen dessert product taught in the present application remain unfused and frozen at temperatures as high as -5°C for extended periods, the beads of the frozen product taught by the Jones patent will melt and fuse to one another at temperatures any higher than 28.9°C . Indeed, the present disclosure teaches a frozen dessert product in pellet form that can be stored in commercial ice cream freezer trucks, whose temperature ranges from about -26°C to -28°C . Moreover, the present dessert product also maintains its pellet form in several other storage systems, with storage temperatures as high as -5°C (Page 11, Line 21 to Page 12, Line 2). In sharp contrast, according to Jones's own teachings, his frozen dairy product is stored in a freezer, in which the temperature is maintained "at least as low as -20°F (-28.9°C), and, preferably, between -30°F and -40°F (-34.4°C and -40°C), if the product is to be stored for periods greater than approximately 30 hours" (Column 2, Lines 59-62). Thirty hours is a very short period and most frozen dessert products are shipped and stored for much longer periods than 30 hours. Moreover, the disclosure instructs that storage of the frozen product taught by Jones "at a temperature of $[-26.1^{\circ}\text{C}]$ for longer than 30 hours is to be avoided" (Column 3, Lines 9-10). Thus, in summary, while the pelletized frozen dessert product of the present disclosure can be stored at temperatures

as high as -5°C , Jones teaches a frozen dairy product in pellet form that can only be stored in a freezer with a temperature of -28.9°C or lower.

Several storage systems provide environments where the temperature ranges from -28.9°C to -5°C . For instance, in addition to the aforementioned ice cream freezer trucks, commercial freezer truck temperatures range from about -18°C to -20°C . In addition home deep freezer systems provide a storage temperature that ranges from about -15°C to -18°C , and home freezers associated with refrigerators generally provide a storage temperature ranging from about -6°C to -10°C (Page 11, Line 21, to Page 12, Line 2). Thus, the present invention can be kept in any of numerous storage systems, ranging from ice cream truck freezers, to commercial freezer trucks, and even in a domestic freezer system associated with a homeowner's own refrigerator. On the other hand, because it cannot be stored at temperatures higher than -28.9°C , the product taught by Jones cannot be kept in any of the aforementioned storage systems for much longer than a day. A possessor of the product is thus required to utilize a specialized colder storage system that is not common and expensive to purchase and considerably more expensive to run because of the significantly lower temperature that must be maintained.

The claims of the present application have been amended to amended to better highlight the distinctions in the possible storage temperatures and storage systems for proper preservation of the frozen dessert products of the present disclosure and the prior art. As such, any claims rejected on the basis of unpatentability over Jones should now be allowable.

In addition to Jones, the Examiner has cited U.S. Patent No. 5,403,611, issued to Tomita et al. against claims 1-30 of the present application, and U.S. Patent No.

4,374,154, issued to Cole et al. against claims 6, 7, and 9-33 of the present application. Both inventions, however, do not speak at all to a single-phase pelletized frozen dessert product, but rather a standard fused ice cream product. The claims of the present disclosure have been amended to reflect these distinctions.

The invention taught by the prior art patents is a frozen food product, *not* in single-phase pellet or beaded form. As such, there are several distinctions from the pelletized dessert product of the present invention. For instance, the product described in both prior art patents is a soft solid block or clump of ice cream which is entirely fused together, and which may be scooped out of the container in large chunks for consumption. The dessert product taught in the present disclosure, however, consists of several tiny pellets, each containing the composition of the desired dessert product, whether it be ice cream, frozen yogurt, or other frozen dessert, but each pellet being separate in structure from every other pellet, without fusing.

Beyond the practical difference between the two products, the difference in the typical storage temperatures for the pelletized dessert product and the non-pelletized ice cream product described by the prior art patents is vast. While the typical frozen pelletized dessert product requires storage in temperatures as low as -40°C, the temperature required for storage of a soft serve ice cream product, as disclosed by Cole et al., ranges from -9°C to -6°C (Column 1, Line 23). Thus, the melting point for ice cream products or similarly fused dessert products is typically much higher than the melting point of any pelletized or beaded dessert product.

A further distinction between a fused ice cream product and the pelletized dessert product of the present disclosure exists, namely, while each pellet of the dessert product

disclosed herein is in a single solid phase, ice cream is essentially a three-phase product (solid, liquid, and gas) (Page 5, Lines 29-31). Applicant's pellet is a much denser product for consumption. Furthermore, as disclosed in the present application, because of the lack of air incorporated within each pellet of the present invention, the frozen product of each pellet is 100% premix. Moreover, because there are no pockets of concentrated liquids and syrups in applicant's pelletized product, there are no different freezing points within the structure of the pellet (Page 6, Lines 19-22).

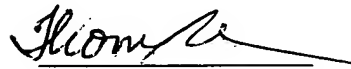
Given the aforementioned physical differences between the prior art products and the present invention, any assumptions by the Examiner as to the melting point of the product taught by Tomita et al. based on the percentage of sugar in the premix is irrelevant. Even with a higher sugar content, a typical ice cream product is going to achieve a higher melting and freezing point than a beaded product. Moreover, any compositional comparisons to the product disclosed by Cole et al. are also irrelevant given the fact that the dense, frozen, single phase product with a lower melting point that is produced by Applicant is distinct in many ways from the three-phase creamy soft serve product taught by Cole et al.

Because of the aforementioned distinctions of the present invention from those taught by Tomita et al. and Cole et al., as well as the amendments made to the claims of the present application, any claims rejected on the basis of unpatentability over Tomita et al. or Cole et al. should now be allowable.

CONCLUSION

For the foregoing reasons, Applicant requests reconsideration of the rejection.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Thomas A. O'Rourke", with a long horizontal flourish extending to the right.

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CERTIFICATE OF MAILING



I hereby certify that the foregoing Response was mailed by first class mail,
postage prepaid, in an envelope addressed to the Commissioner for Patents
P.O. Box 1450 Alexandria, VA 22313-1450 on this 7th day of January, 2008.

Thomas A. O'Rourke